

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/843,254	MIHCAK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Minh Dinh	2132	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
2. ☒ The allowed claim(s) is/are 11-13,15-19 and 37.
3. ☒ The drawings filed on 24 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-692) *</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>7/5/ and 7/23/01, 8/18/03, 10/01/04.</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, 20-28 and 35, drawn to digital watermark, classified in class 713, subclass 176.
  - II. Claims 11-19, drawn to a hashing method, classified in class 713, subclass 181.
  - III. Claims 29-34 and 36, drawn to a method for classifying digital signals, classified in class 704, subclasses 243 and 245.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed (group II) does not require the particulars of the subcombination as claimed because computing a hash value does not require generating an exponential distribution having multiple distinct quantization levels. The subcombination has separate utility such as hashing digital contents to generate digital signatures.

Inventions III and the other two groups (I and II) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, invention III is directed to a method for categorizing digital contents. Inventions I and II are directed to a method for identifying digital contents.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for one group is not required for other groups, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Kasey Christie on 10/18/04, a provisional election was made without traverse to prosecute the invention of Group II, claims 11-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-10, 20-36 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention

***Examiner's Amendment***

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kasey Christie on 10/28/04.

- The Specification has been amended.
- Claims 1-10, 14 and 20-36 have been cancelled; claims 11 and 15 have been amended; and claim 37 has been added.

Please enter the attached amendment.

4. The following is an examiner's statement of reasons for allowance. The present invention is directed to a method for hashing digital signals such as digital audio signals or digital images. More specifically, independent claim 11 identifies the uniquely distinct feature of "randomly dividing the digital signal transform into multiple chunks, each chunk containing signal data, wherein the dividing is carried out recursively to form hierarchical levels of overlapping chunks". The closest prior art, Schneider et al. (A Robust Content Based Digital Signature For Image Authentication) and Venkatesan et al. (Robust Image Hashing), also disclose a method for hashing digital image.

Schneider divides the image into blocks where smaller blocks can be combined to form

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larger blocks of variable sizes. Venkatesan randomly divides the image into blocks of different sizes. The prior art, taken either singly or in combination, fails to anticipate or fairly suggest the limitations of applicant's independent claim, in such a manner that a rejection under 35 U.S.C 102 or 103 would be proper. The claimed invention is therefore considered to be in condition for allowance as being novel and nonobvious over prior art

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Other Information/Remarks***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Xu et al. (6,674,861) discloses a method for embedding content-based watermark in digital audio signal.

Fischer et al. (6,799,158) discloses a method for generating a characteristic identifier of digital data.

Lin et al., A Robust Image Authentication Method Distinguishing JPEG Compression from Malicious Manipulation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 703-306-5617.

The examiner can normally be reached on Mon - Fri: 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 703-305-1830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MD

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Art Unit 2132

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11/01/04



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